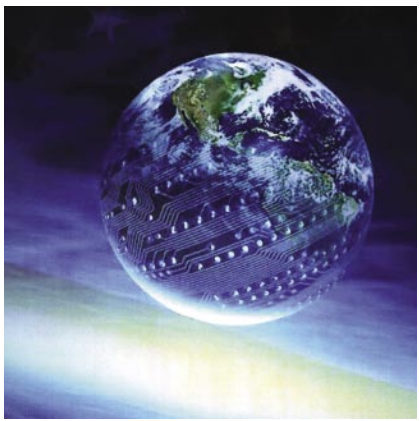
The Power of

INFORMATION

Access Share Collaborate



Transforming the National Defense Team to an Internet World

DoD Chief Information Officer

Report Documentation Page

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DEPARTMENT OF DEFENSE
UNITED STATES OF AMERICA

The Power of Information

"We will conduct network-centric operations…"

The National Defense Strategy clearly states how we will operate in the future – we will be Net-Centric. Our job is to deliver the critical enabling capability to conduct Net-Centric Operations. Our pioneering effort will radically change the way the entire Defense Enterprise does business.

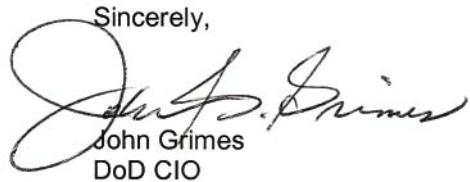
Defense transformation hinges on the recognition that information is our greatest source of power. We can leverage information to allow decision makers at all levels to make better decisions faster and act sooner.

This booklet, the first in a series, takes us back to the basics:

"Why must we change?"
"How are we changing?"
"What does it mean to me?"

Rather than an in-depth technical discussion, this booklet focuses on a far more complex topic – What is Net-Centricity? Perhaps by reminding ourselves of the fundamentals, we can stay better focused as we work out the details.

Sincerely,



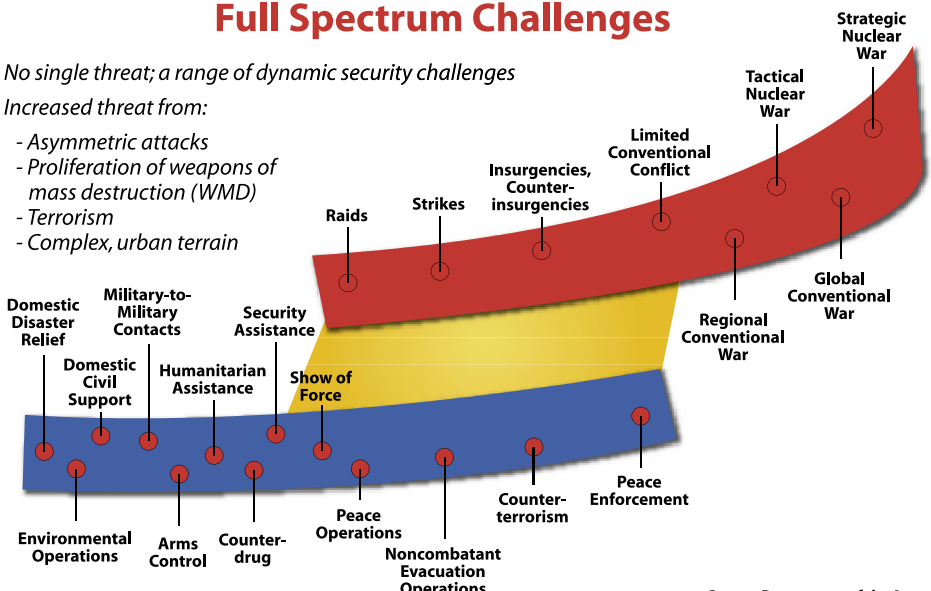
John Grimes
DoD CIO

IMAGINE…

- A platoon in an alley can find which building an insurgent entered
- An ammunition supply team can re-direct deliveries to an unforeseen hot-spot
- A government buyer can find a new provider for a key component
- A disaster recovery team can add and dismiss critical participants from NGOs and business/industry as field conditions develop
- A re-tasked commander can plan on-the-fly
- A training environment in which trainees can do virtual ride-alongs
- A spouse can establish a relocation plan despite a last minute change in orders
- A unit in the field can access information as soon as it is available and posted (without delays for extended analysis)
- Medical specialists can be located as battlefield wounds are being stabilized
- Assignments officers can maintain pace with battlefield realities and academic opportunities

Full Spectrum Challenges

- *No single threat; a range of dynamic security challenges*
- *Increased threat from:*
  - *Asymmetric attacks*
  - *Proliferation of weapons of mass destruction (WMD)*
  - *Terrorism*
  - *Complex, urban terrain*



Source: Department of the Army

21st Century National Security Challenges:

UNCERTAIN

- Unknown, Asymmetric Threats
- Wide Array of Missions
- Unanticipated Partners
- Unpredictable Situations
- Fast Paced Operations
- Instant World Attention

Can't know what will be needed or when

Must make decisions on ever-shorter timelines

MONGOLIA

21st Century Information Opportunities:

VAST

- Expanded Throughput
- Simultaneous Reach
- Multi-Media
- Real-Time Access
- Dynamic Planning/Collaboration
- Time/Space Independent

Awareness can be significantly extended

Information can be easily accessed

WWW

The Information Age Has Arrived

The Global Internet World

World Wide Web → *Store/Share Information*

Internet → *Move Information*

E-mail/IM/Chat → *Collaborate/Expose Information*

Search Engine → *Find/Access Information*

Parental Authorities → *Control Information Flow*

Information World Wide

Unlimited Access

Unprecedented Speed

Transforming National Defense

National Security Strategy

Transform America's national security institutions to meet the challenges and opportunities of the twenty-first century.

National Defense Strategy

We will conduct network-centric operations with compatible information and communications systems, usable data, and flexible operational constructs.

Beyond battlefield applications, a network-centric force can increase efficiency and effectiveness across defense operations, intelligence functions, and business processes...

Transforming to a network-centric force requires fundamental changes in process, policy, and culture.

National Military Strategy

...creation of a collaborative information environment that facilitates information sharing, effective synergistic planning, and execution of simultaneous, overlapping operations... on demand to defense policymakers, warfighters and support personnel.

What Do We Need?

AGILITY

Information Needs Can't Be Anticipated

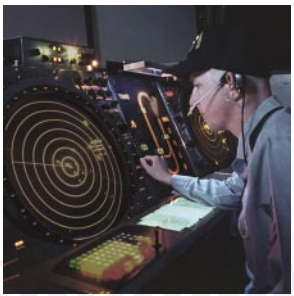
Information Demands are Soaring

Therefore...

CONFRONT UNCERTAINTY WITH AGILITY

> *"Uncertainty is the defining characteristic of today's strategic environment"*
>
> *National Defense Strategy*

“I can get the information I need”



When I need it

Where I need it

How I need it

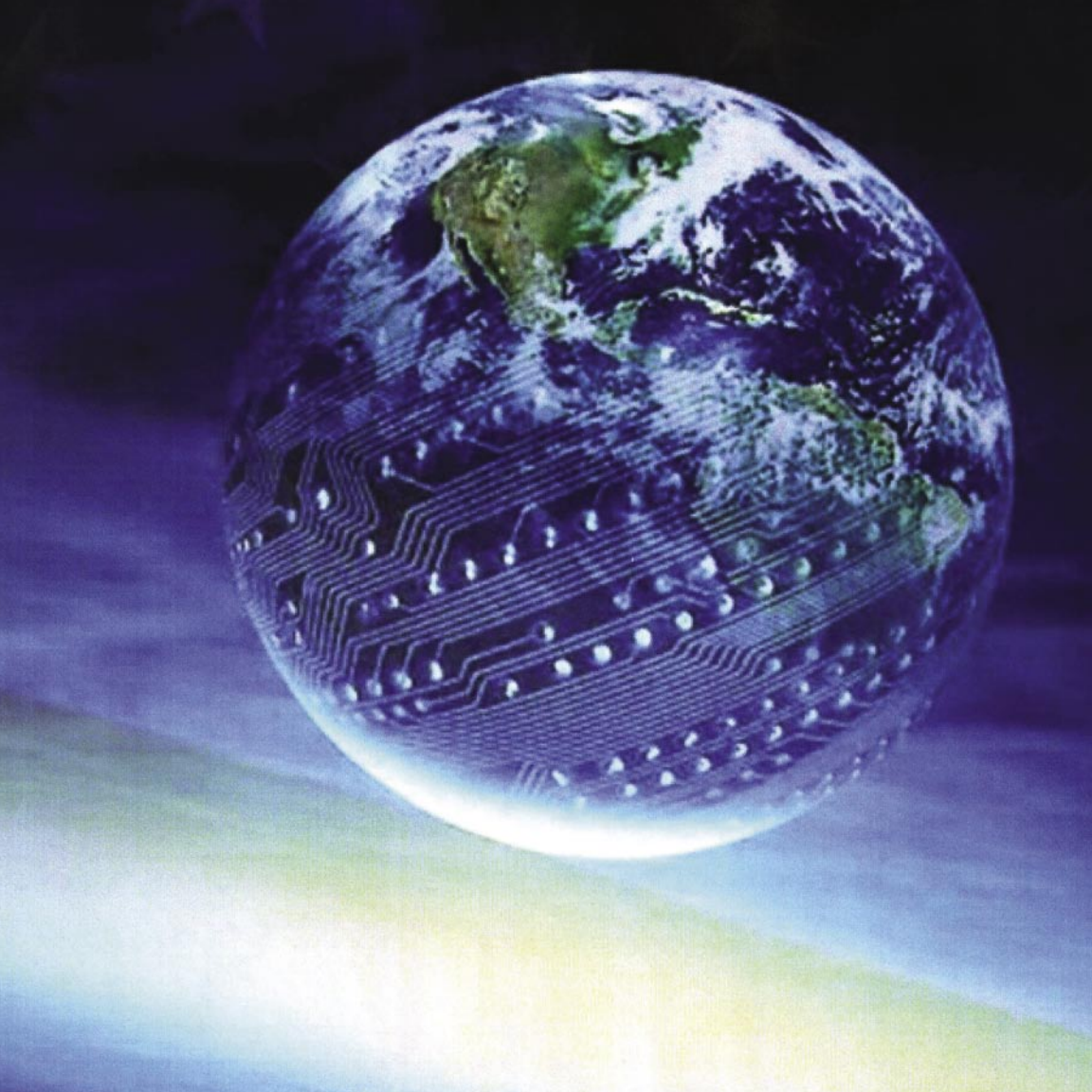
How Do We Become More Agile?

A NET-CENTRIC INFORMATION ENVIRONMENT

Users at all levels and in all situations:

- Accessing the best information available
- Pooling their knowledge
- Making better decisions faster
- Contributing to our security daily

> *"...focus on providing the tip of the spear with the information and actionable knowledge to determine the best course of action..."*
>
> *MG Peter W. Chiarelli*
> *CG, 1st Cavalry Division*

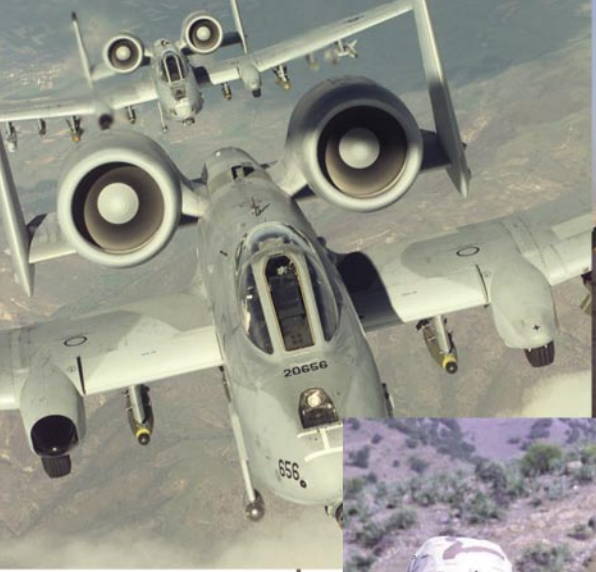


What Does "Net-Centric" Mean?

NET-CENTRIC

People, processes, and technology working together to enable timely and trusted:

- **ACCESS to information**
- **SHARING of information**
- **COLLABORATION among those involved**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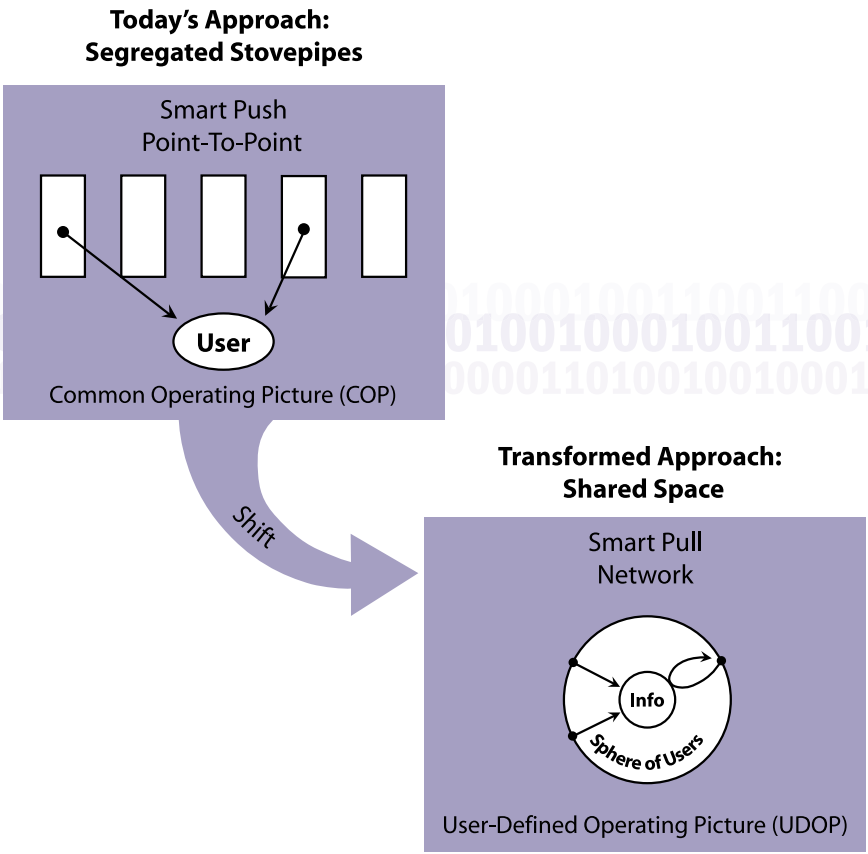
What Must Be Addressed?

- Security Requirements
- High Information Demands
- Budget Pressures
- Uncertain Information Needs
- Wide Range of Operations
- Stress on the Force
- International Partners
- Interagency Collaboration
- Unanticipated Users

The National Defense Team's Internet World Must Accommodate Demanding Environment and Legacy Systems


Today's Approach:
Segregated Stovepipes
Smart Push
Point-To-Point
User
Common Operating Picture (COP)
Shift
Transformed Approach:
Shared Space
Smart Pull
Network
Info
Sphere of Users
User-Defined Operating Picture (UDOP)

What Will It Take?

AN INFORMATION AGE APPROACH

Fundamental Shift:

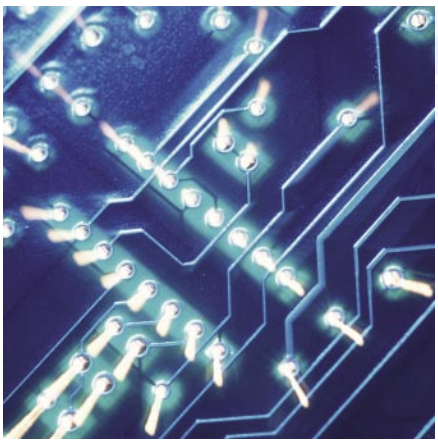
- Requires ENTERPRISE, not stovepipes
- Requires ACCESS, not exclusivity
- Requires TRUST
  - Trust in the System (availability)
  - Trust in the Information (assurability)
  - Trust in the Participants (identity)

COP: *User "gets what he gets"*

Shift

UDOP: *User "takes what he needs" and "contributes what he knows"*

An Information - based CULTURE



An Information - based FRAMEWORK

Better, faster decisions based on best data available

How Will We Do It?

Shift the Culture to:
"Right to Know" and "Need to Share"

- Customer Oriented
- Enterprise Level
- Role-Based Access
- Risk Tolerant
- Non-Prescriptive
- Unconstrained Interfaces

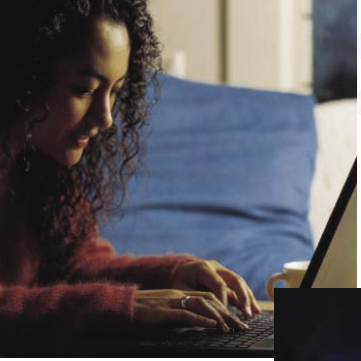
Behavior: Access, Share, Collaborate

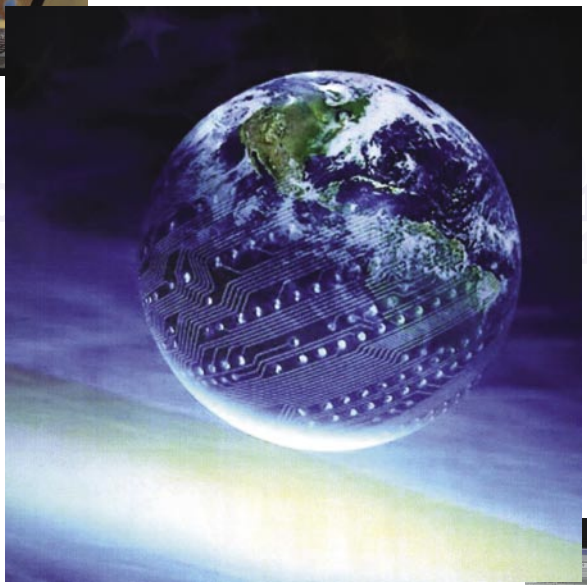
Transform the Framework to:
The Net-Centric Information Environment

- NetOps: How to "manage" the system
- Data Strategy: How to "share" the data
- Info Assurance: How to keep it "dependable"
- Enterprise Services: How to "access" the data
- Info Transport: How to "move" the data

Data: Visible, Accessible, Understandable

Agile, not fragile



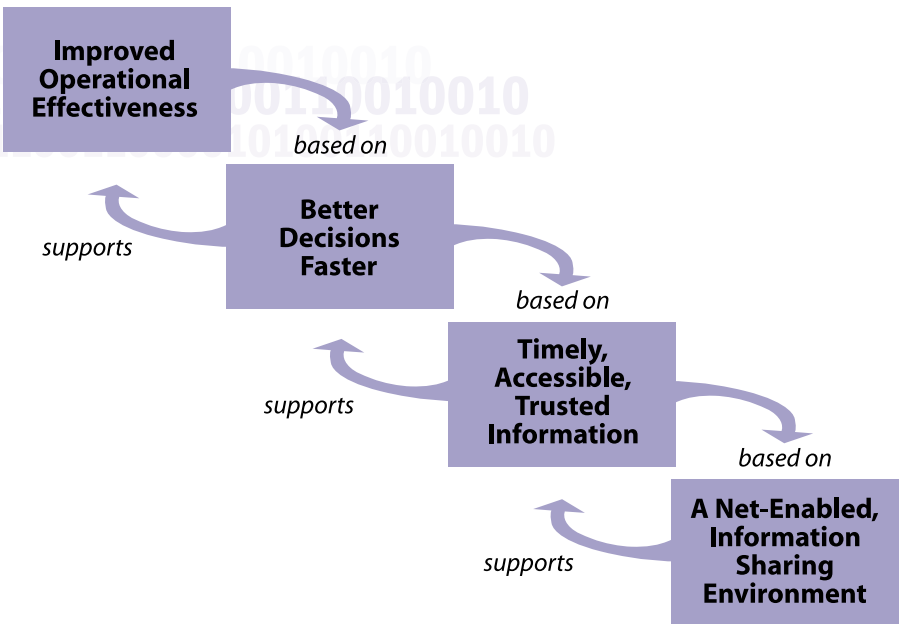


What Will It Look Like?

General Public		National Defense Team
World Wide Web →	*Store/Share Information*	← **Net-Centric GIG**
Internet →	*Move Information*	← **Transport**
E-mail/IM/Chat →	*Collaborate/Expose Information*	← **Net-Centric Applications**
Search Engine →	*Find/Access Information*	← **Enterprise Services**
Parental Authorities →	*Control Information Flow*	← **Role-Based Access**
Already in the Internet World		**Transforming to the Internet World**

What Is the Bottom Line?

Our Nation's Security



ELCOME HOM

Transforming the National Defense Team

WHAT is being done? *Common, Enterprise-Level Network -- Internet World*

WHY is it being done? *Confront Uncertainty with Agility*

HOW will it be done? *Evolve the Net-Centric Global Information Grid (GIG)*

WHO benefits? *National Defense Team*

WHAT will it look like? *Information Age Environment*

WHAT will it take? *A Culture Shift -- Access, Share, Collaborate*

WHEN will there be results? *Experience Now; Capability Evolving*

HOW will it help? *Better Decisions Faster, and Act Sooner*

WHY should I care? *Information: Where It's Needed, When It's Needed, To Those Who Need It*

Our Future Depends On It

The Power of

INFORMATION

Access Share Collaborate

DoD Chief Information Officer
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